

IN THE CLAIMS:

1 (cancelled).

2 (currently amended). A method for producing electronic video signals representative of color images of a scene, comprising the steps of:

providing a luminance sensor and a color sensor having a color filter thereover, said color filter having ~~a two-color~~ only two colors, in a red-green checkerboard filter pattern;

providing a beamsplitter, and providing a lens system that focuses light from said image, via said beamsplitter, onto said luminance sensor and said color sensor; and

producing electronic video signals from outputs of said luminance sensor and said color sensor;

said step of producing video signals from the output of said color sensor including diagonal binning of the signals from said color sensor to obtain a red color signal and a green color signal.

5 (currently amended). The method as defined by claim ~~3~~ 2, wherein said diagonal binning includes clocking out of said color sensor using alternating horizontal and vertical shifts.

6 (cancelled).

7 (currently amended). The method as defined by claim ~~[[4]]~~ 2, wherein said step of producing video signals from the outputs of said luminance sensor and said color sensor includes deriving a blue color signal from the output of said luminance sensor and said red and blue color signals.

8 (currently amended). The method as defined by claim ~~6~~ 5, wherein said step of producing video signals from the outputs of said luminance sensor and said color sensor includes deriving a blue color signal ~~frø~~ from the output of said luminance sensor and said red and blue color signals.

9 (previously presented). The method as defined by claim 7, wherein said step of producing video signals further includes decimating and interpolating said red and green color signals to obtain low resolution red and green color signals, filtering said luminance signals to obtain a low resolution white signal, and deriving a low resolution blue color signal from said low resolution white signal and said low resolution red and green color signals.

10 (previously presented). The method as defined by claim 8, wherein said step of producing video signals further includes decimating and interpolating said red and green color signals to obtain low resolution red and green color signals, filtering said luminance signals to obtain a low resolution white signal, and deriving a low resolution

blue color signal from said low resolution white signal and said low resolution red and green color signals.

11 (previously presented). The method as defined by claim 9, wherein said step of producing video signals further includes deriving high resolution red, green, and blue color signals from said low resolution red, blue, and green signals and said luminance signal.

12 (previously presented). The method as defined by claim 10, wherein said step of producing video signals further includes deriving high resolution red, green, and blue color signals from said low resolution red, blue, and green signals and said luminance signal.

13 (previously presented). The method as defined by claim 7, wherein said step of providing a lens system comprises providing a motion picture film camera type of lens system.

14 (previously presented). The method as defined by claim 8, wherein said step of providing a lens system comprises providing a motion picture film camera type of lens system.

15 (currently amended). Apparatus for producing electronic video signals

representative of color images of a scene, comprising:

a luminance sensor and a color sensor having a color filter thereover, said color filter having ~~a two-color~~ only two colors, in a red-green checkerboard filter pattern;

a beamsplitter, and a lens system that focuses light from said image, via said beamsplitter, onto said luminance sensor and said color sensor; and

means for producing electronic video signals from outputs of said luminance sensor and said color sensor.

16 (previously presented). Apparatus as defined by claim 15, wherein said lens system comprises a motion picture film camera type of lens system.